

**Navigation Study at the Approach
to Lock and Dam 24,
Upper Mississippi River**

**Hydraulic Micro Model
Investigation**

Volume 2 of 2

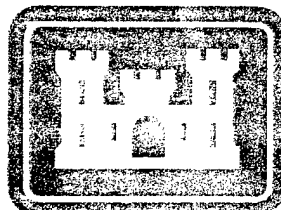
Jan 98

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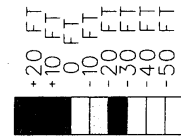


**US Army Corps
of Engineers**

St. Louis District



Elevations Referenced
to LWRP



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ST. LOUIS, MISSOURI

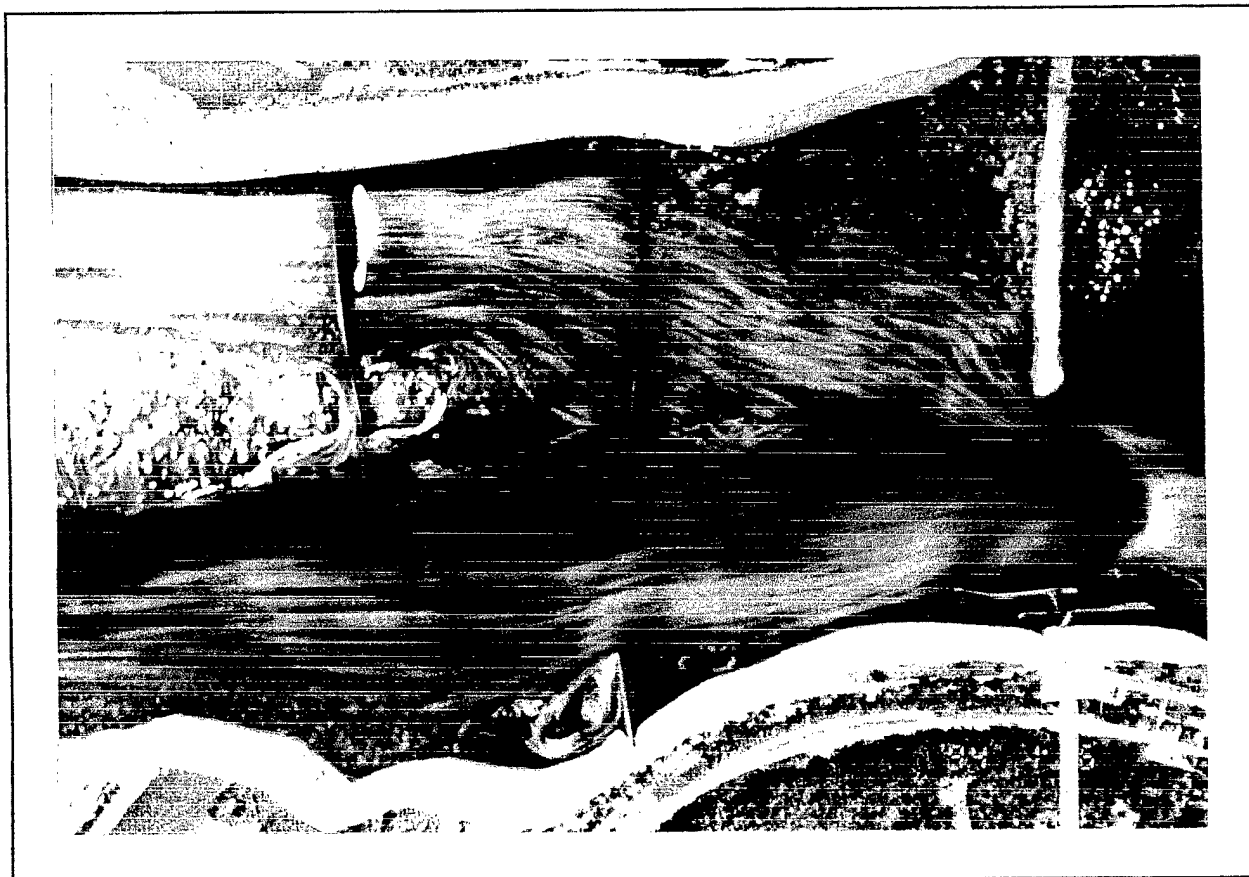
PREPARED BY: D. G. Gorman
DRAWN BY: D. Gorman
CHECKED BY: R. Gorman

Lock and Dam #24, Micro Model Study
Mississippi River Miles 271 - 277

Alternative D



DESIGN FILE: D-1004-MODEL-1407-24
PLOT SCALE: 1" = 2000'



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PREPARED BY: D. Gordon
CHECKED BY: R. Deviney

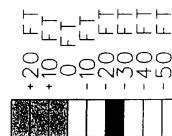
Lock and Dam 24 Micro Model Study
Mississippi River Miles 271 - 277
Flow Visualization - Alternative D

PLATE NO

35



Elevations Referenced
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Lock and Dam #24 Micro Model Study
Mississippi River Miles 271 - 277
Alternative E

DESIGN FILE: D-24-MOD-1-100-1500
PLOT SCALE: 1" = 2000'

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PLATE NO.

36



U.S ARMY ENGINEER DISTRICT, ST. LOUIS
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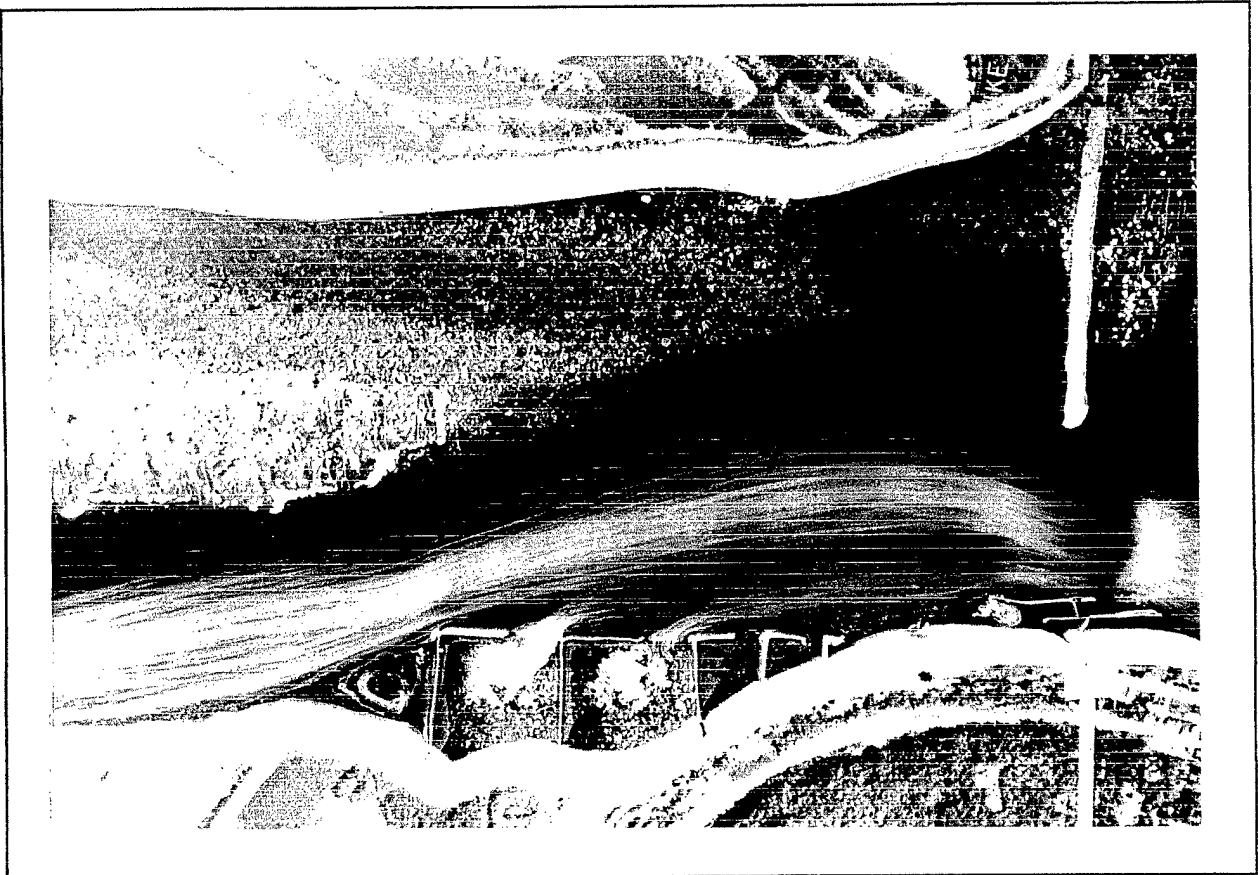
PREPARED BY: D. Gordon
CHECKED BY: R. Devroy

Lock and Dam 24 Micro Model Study
Mississippi River Miles 271 - 277

Flow Visualization - Alternative E

PLATE NO

37



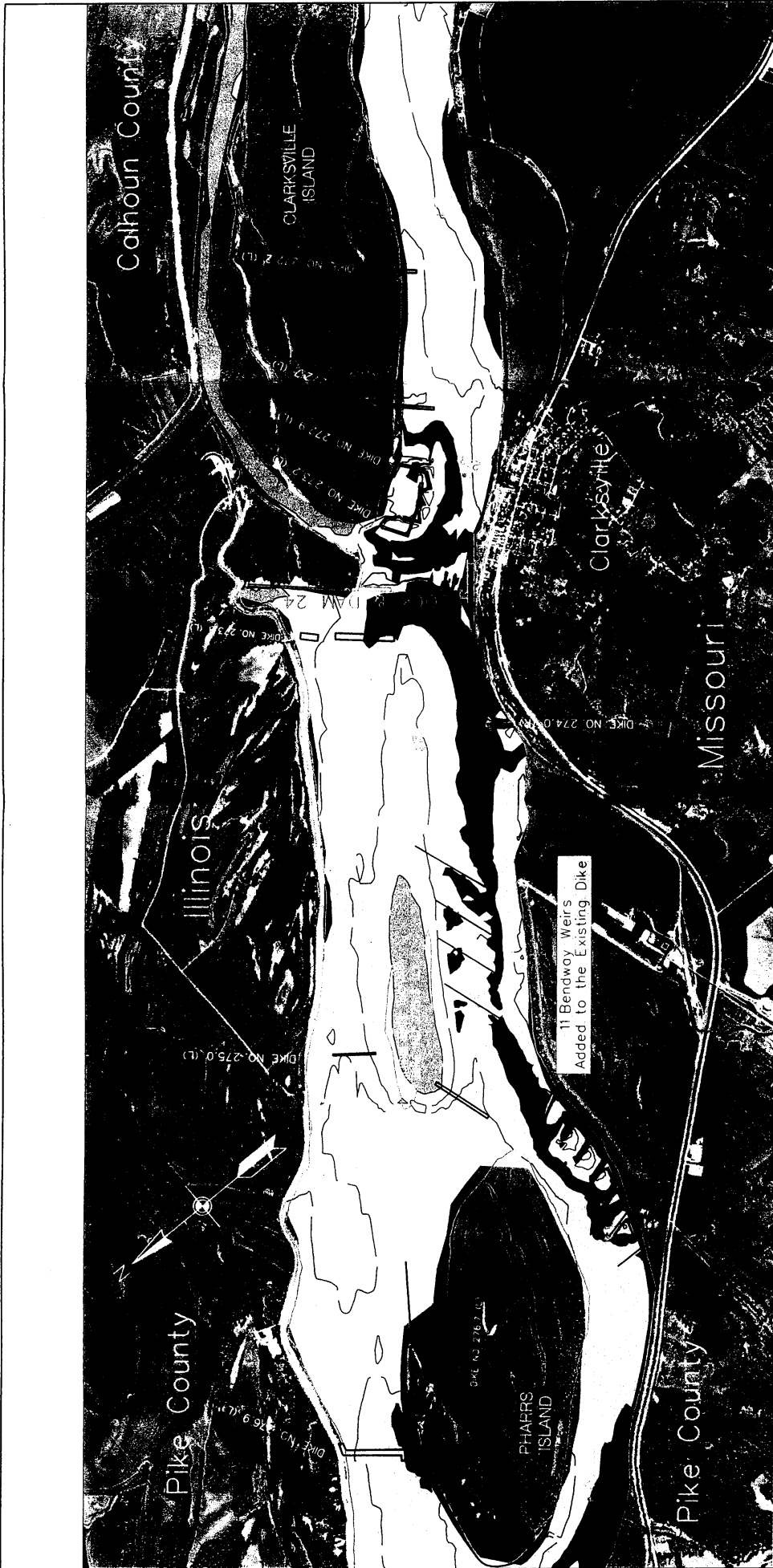
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PREPARED BY: D. Gordon
CHECKED BY: R. Devroy

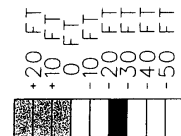
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Mississippi River Miles 271 - 277
Flow Visualization - Alternative F

PLATE NO

39

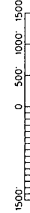


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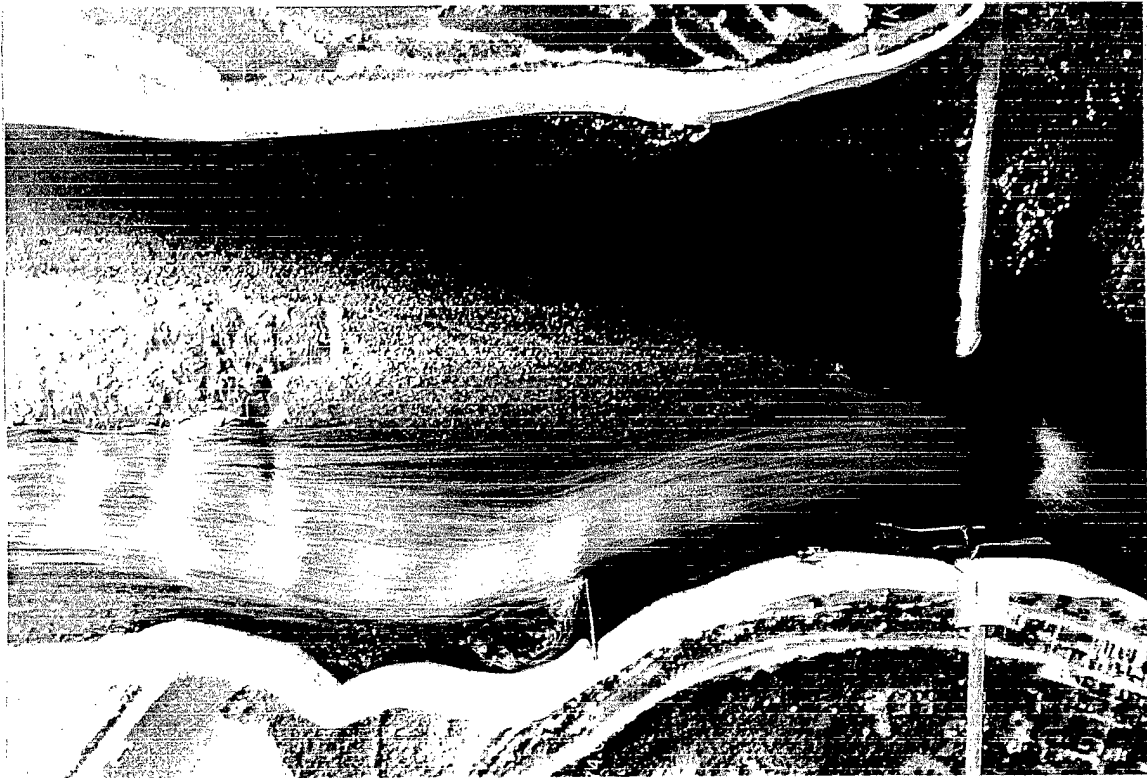


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Lock and Dam #24, Micro Model Study
Mississippi River Miles 271 - 277
Alternative C



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PLOT SCALE 1" = 2000'



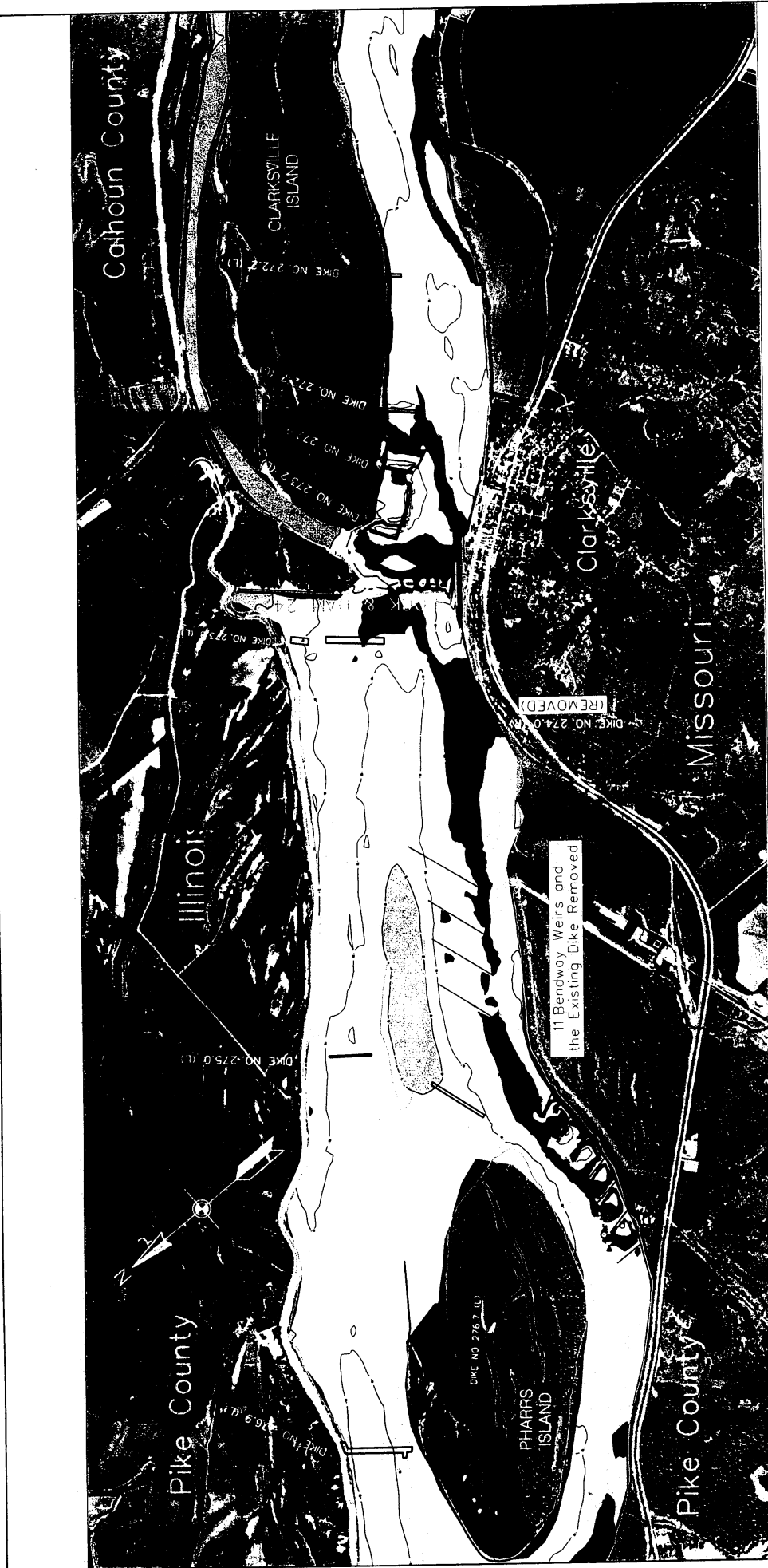
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ST. LOUIS, MISSOURI**

PREPARED BY: D. Gordon
CHECKED BY: R. Downroy

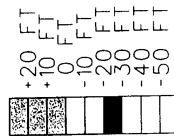
Lock and Dam 24 Micro Model Study
Mississippi River Miles 271 - 277
Flow Visualization - Alternative G

PLATE NO

41



Elevations Referenced
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Lock and Dam #24 Micro Model Study
Mississippi River Miles 271 - 277

Alternative H

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DESIGN FILE D-1004000-140-214

DATE

42



U.S ARMY ENGINEER DISTRICT, ST. LOUIS
CORPS OF ENGINEERS
ST. LOUIS, MISSOURI

PREPARED BY: D. Gordon
CHECKED BY: R. Dawnsky

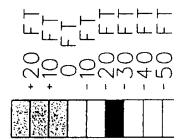
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PLATE NO

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PREPARED BY: G. Gordon
CHECKED BY: G. Gordon
DESIGNED BY: G. Gordon

Lock and Dam #24 Micro Model Study
Mississippi River Miles 271 - 277

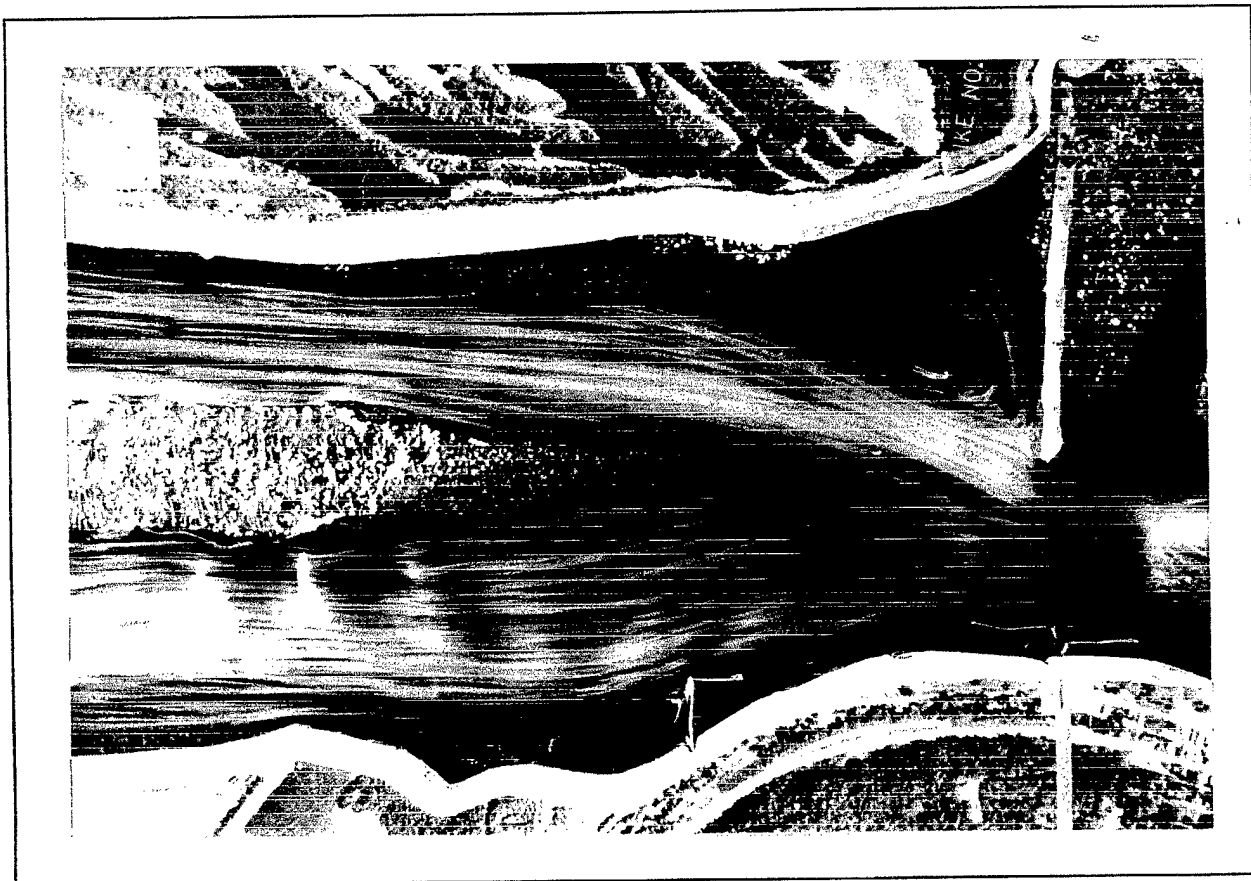
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PLATE NO.

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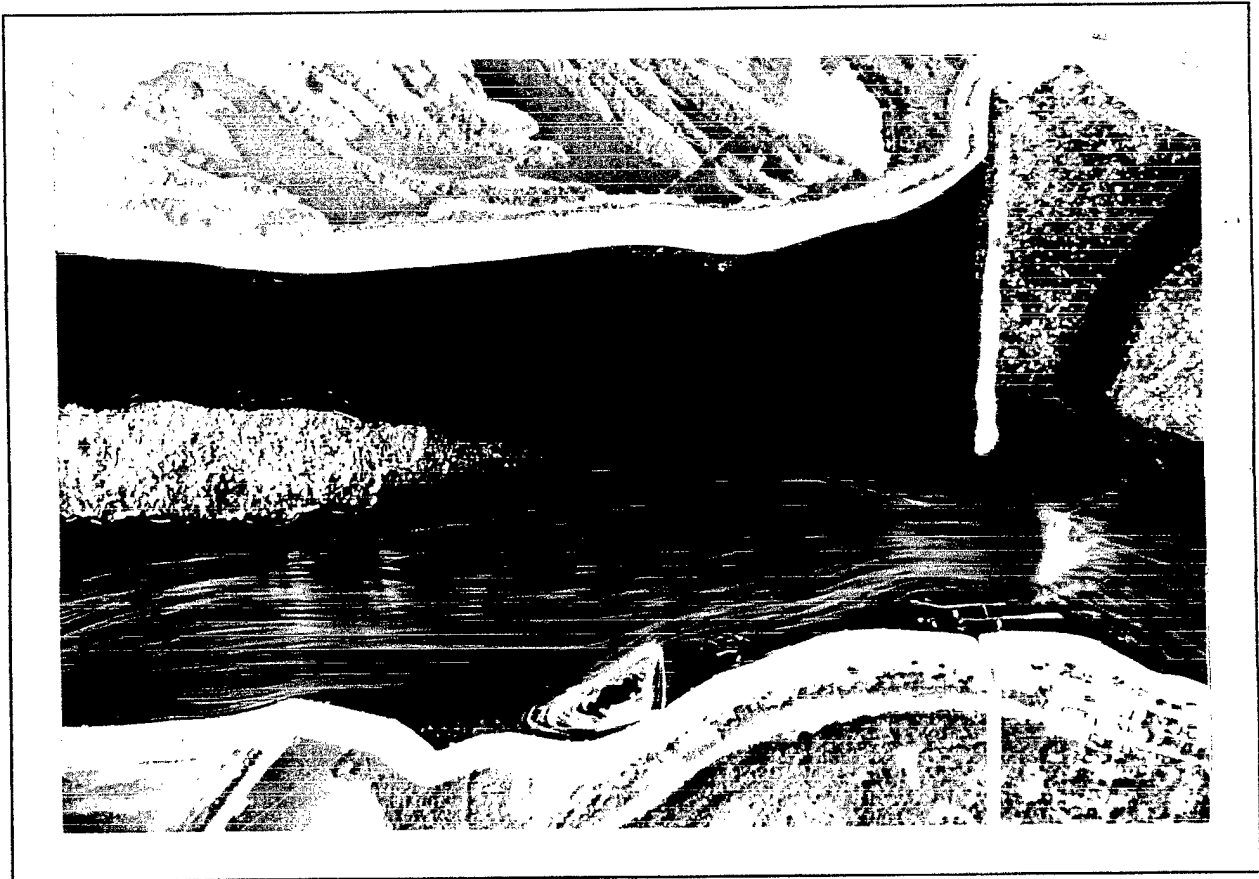
PREPARED BY: D. Gordon
CHECKED BY: R. Dantroy

Lock and Dam 24 Micro Model Study
Mississippi River Miles 271 - 277

Flow Visualization - Alternative I

PLATE NO

45



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PREPARED BY: D Gordon
CHECKED BY: R Darnrey

Lock and Dam 24 Micro Model Study
Mississippi River Miles 271 - 277
Flow Visualization - Alternative J

PLATE NO

47



U.S ARMY ENGINEER DISTRICT, ST. LOUIS
CORPS OF ENGINEERS
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PREPARED BY: D. Gordon
CHECKED BY: R. Devlin

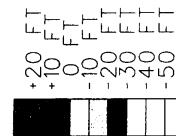
Lock and Dam 24 Micro Model Study
Mississippi River Miles 271 - 277
Flow Visualization - Alternative K

PLATE NO

49



Elevations Referenced
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PREPARED BY: G. Carson
DRAWN BY: G. Carson
CHECKED BY: E. Boney

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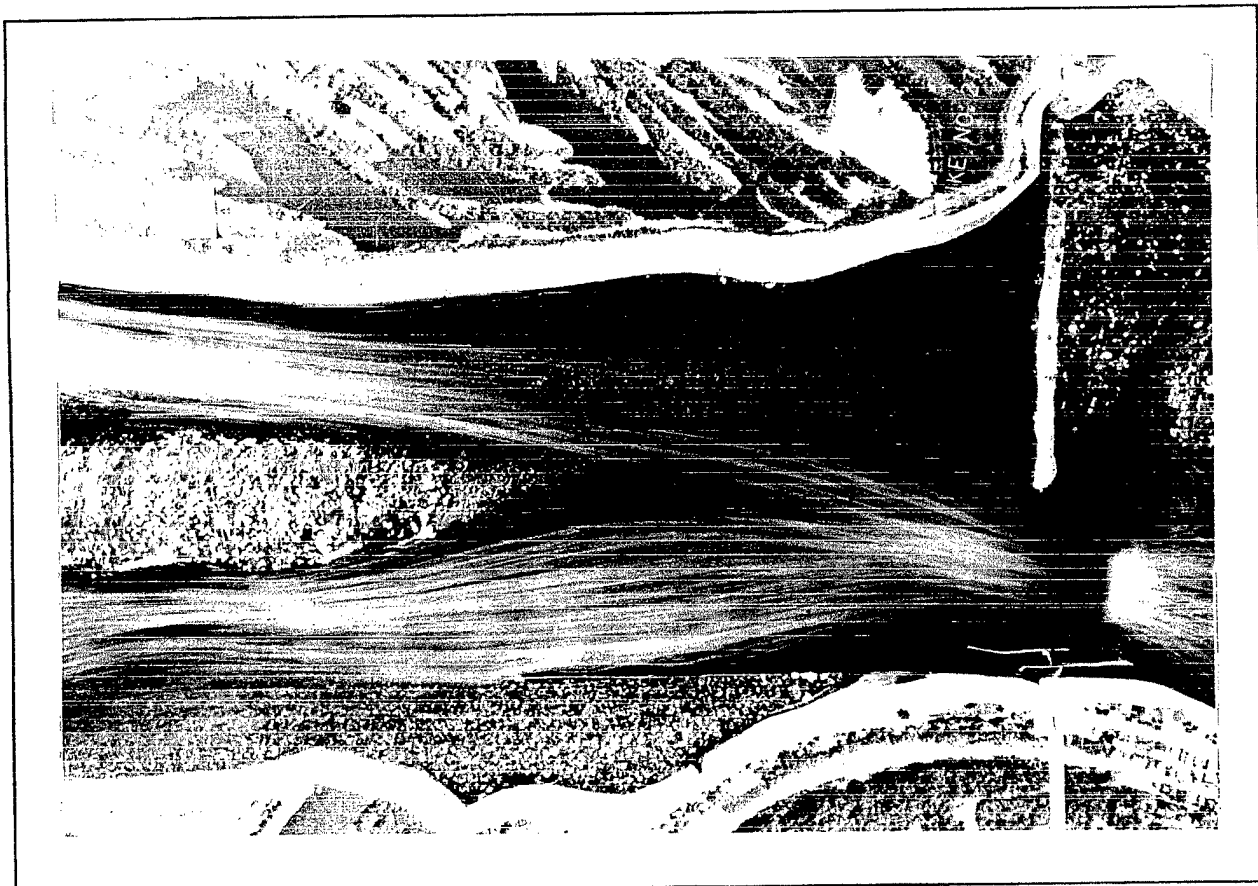
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Mississippi River Miles 271 - 277
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PLOT SCALE: 1" = 200'

PLATE NO.

50



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PREPARED BY: D. Gordon
CHECKED BY: R. Damroy

Lock and Dam 24 Micro Model Study
Mississippi River Miles 271 - 277

Flow Visualization - Alternative L

PLATE NO

51



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to LWRP



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Lock and Dam #24 Micro Model Study
Mississippi River Miles 271 - 277

Alternative M

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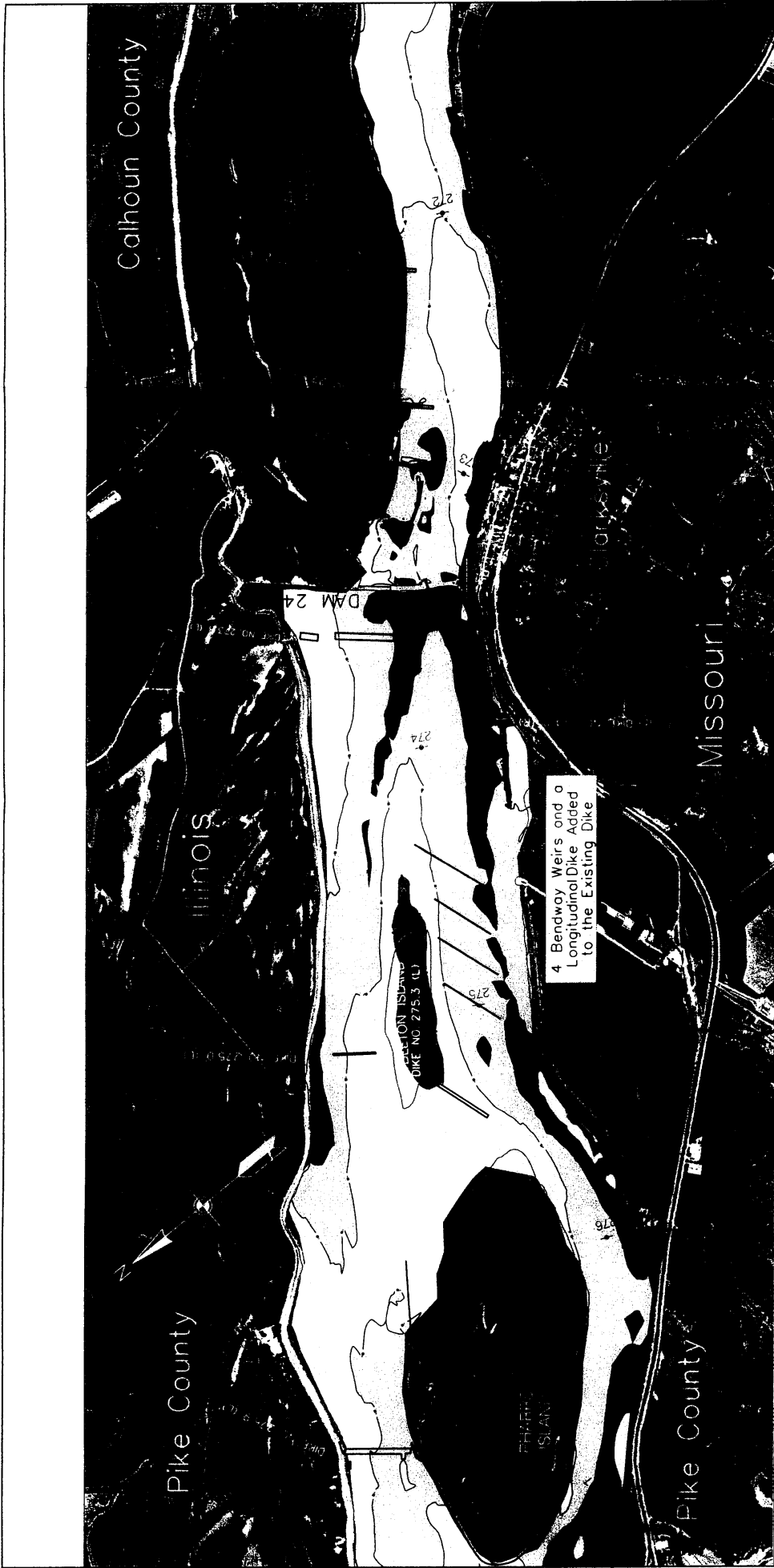
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PREPARED BY: D. Gordon
CHECKED BY: R. Denny

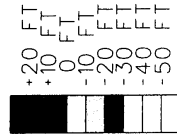
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Flow Visualization - Alternative M

PLATE NO

53



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to LWRP



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PREPARED BY: D. G. Gorman
DRAWN BY: D. G. Gorman
CHECKED BY: R. Gorman

Lock and Dam #24, Micro Model Study
Mississippi River Miles 271 - 277

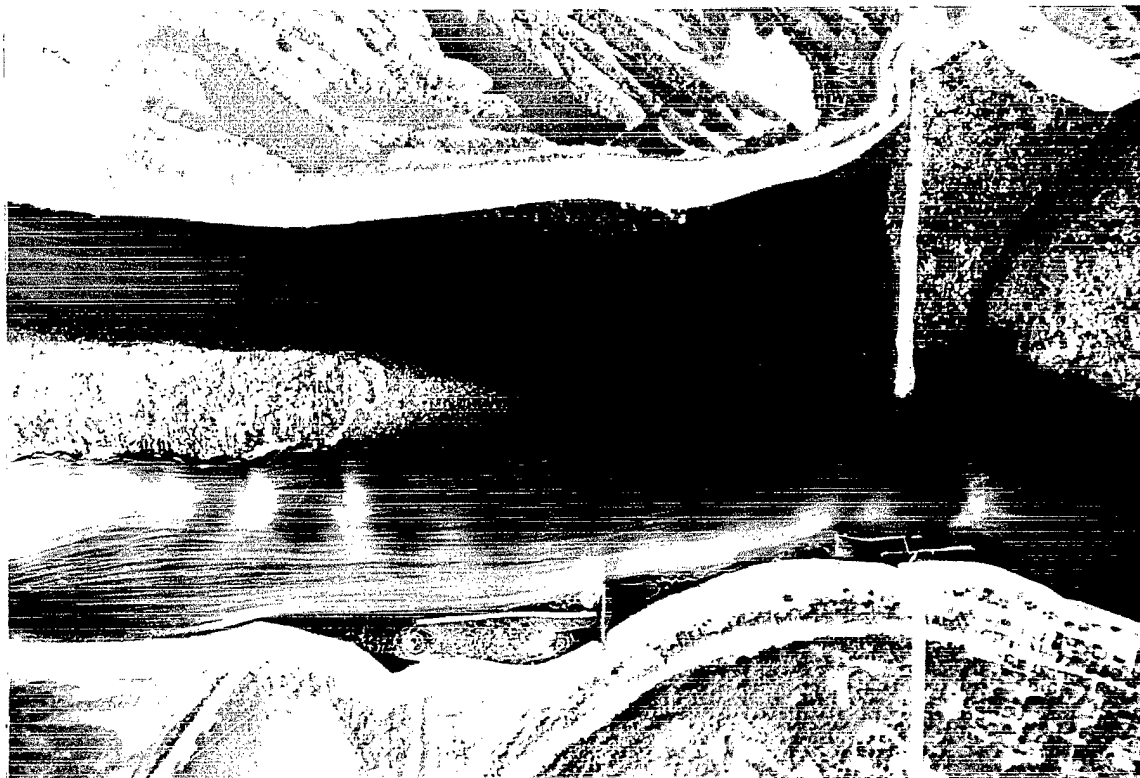
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PLATE NO.

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PREPARED BY: D. Gordon
CHECKED BY: R. Denny

Lock and Dam 24 Micro Model Study
Mississippi River Miles 271 - 277

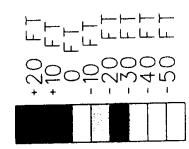
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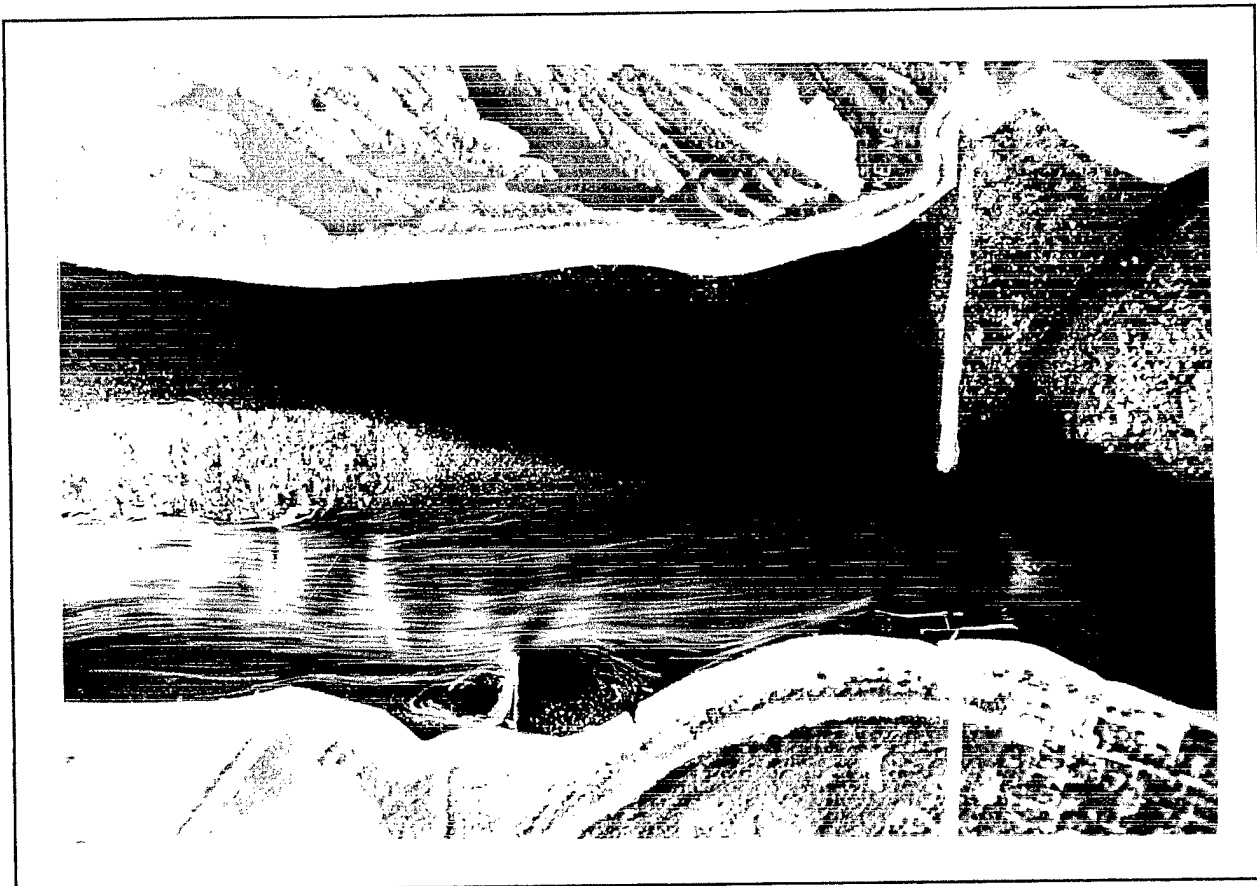


Elevations Referenced
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	PREPARED BY: D. Carson DRAWN BY: D. Carson CHECKED BY: R. Booney

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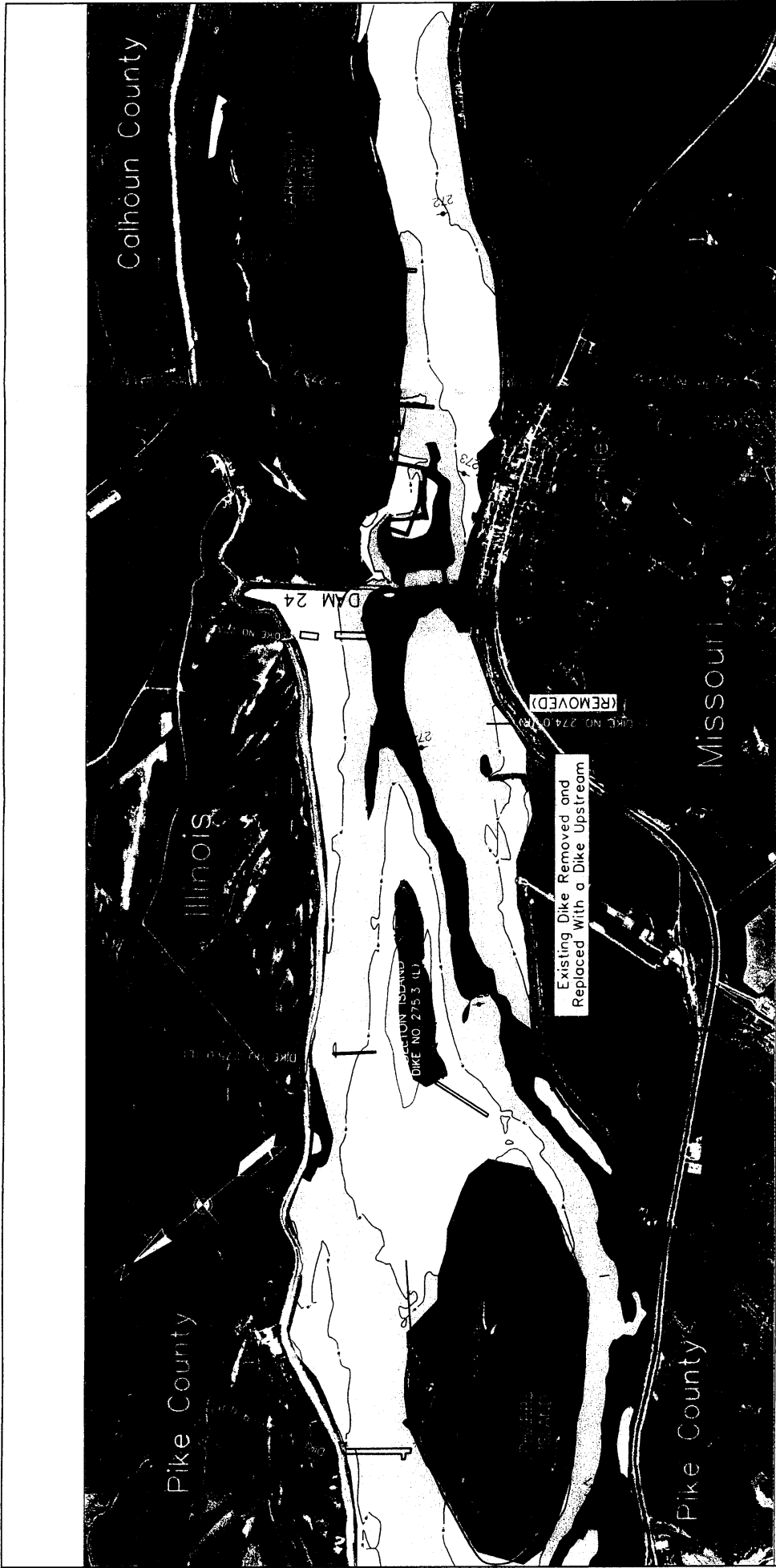
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CHECKED BY: R. Davinroy

Lock and Dam 24 Micro Model Study
Mississippi River Miles 271 - 277

Flow Visualization - Alternative O

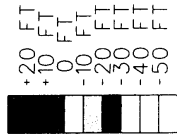
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PREPARED BY: D. G. Gorman
DRAWN BY: D. G. Gorman
CHECKED BY: R. G. Gorman

Lock and Dam #24 Micro Model Study
Mississippi River Miles 271 - 277
Alternative P

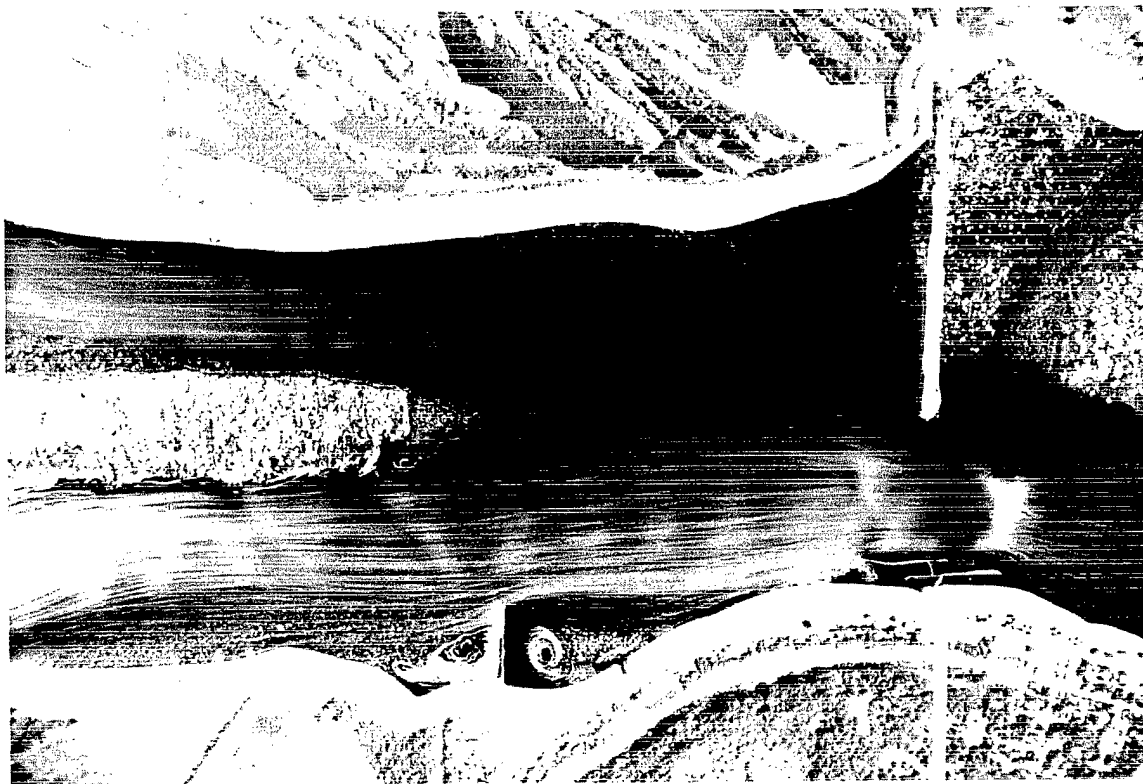
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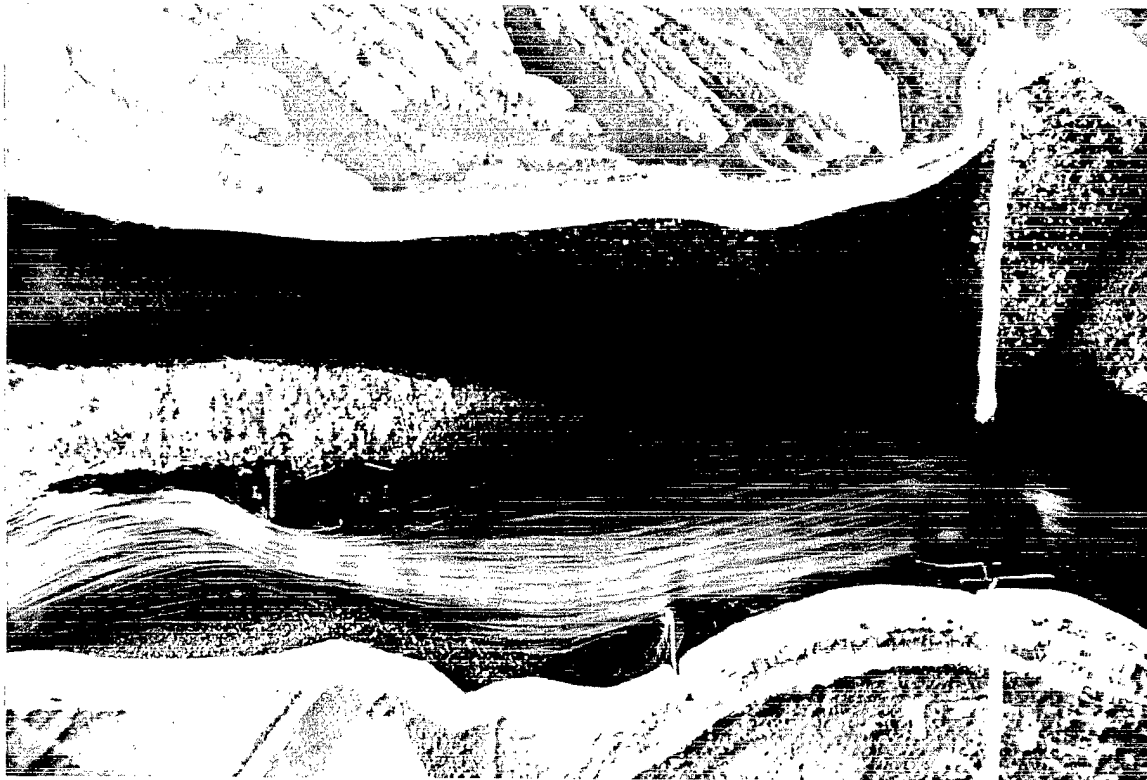
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PREPARED BY: D. Gordon
CHECKED BY: R. Downey

Lock and Dam 24 Micro Model Study
Mississippi River Miles 271 - 277
Flow Visualization - Alternative P

PLATE NO

59



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PREPARED BY: D. Gordon
CHECKED BY: R. DeMay

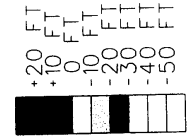
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Mississippi River Miles 271 - 277
Flow Visualization - Alternative Q

PLATE NO

61



Elevations Referenced
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DESIGNED BY: D. Gorman
DRAWN BY: D. Gorman
CHECKED BY: R. Duvvuri

Lock and Dam #24 Micro Model Study
Mississippi River Miles 271 - 277

Alternative B

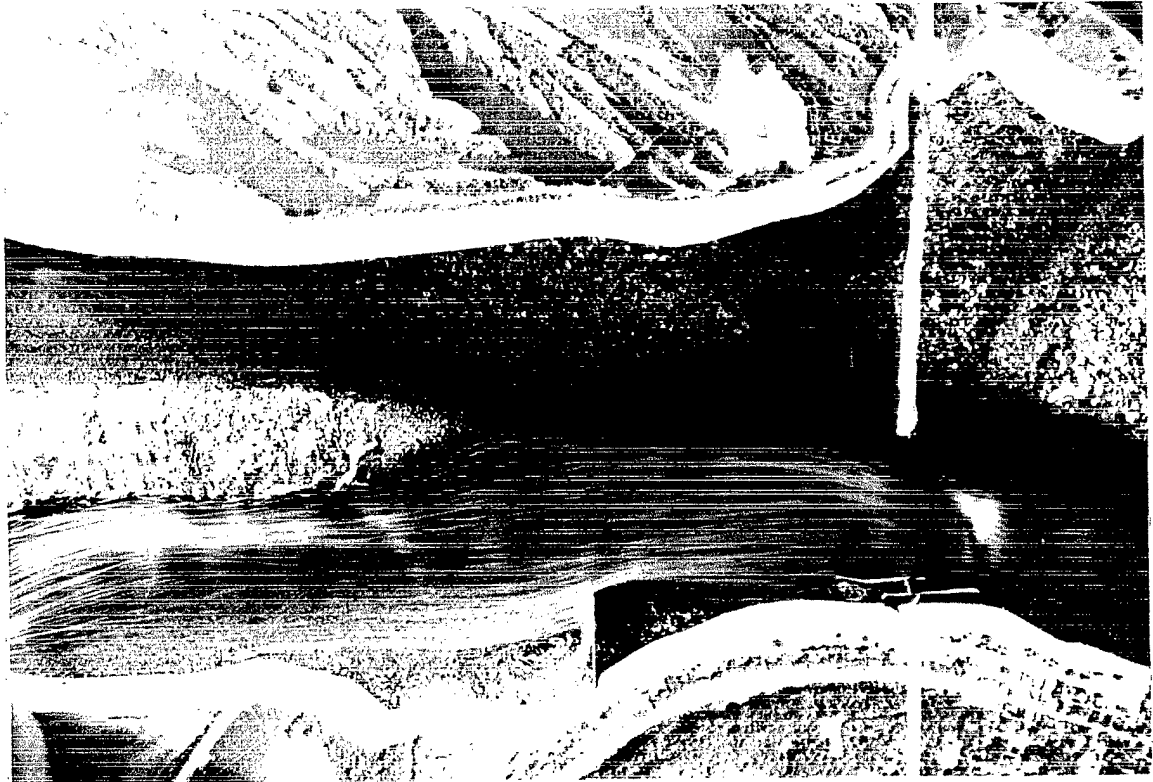


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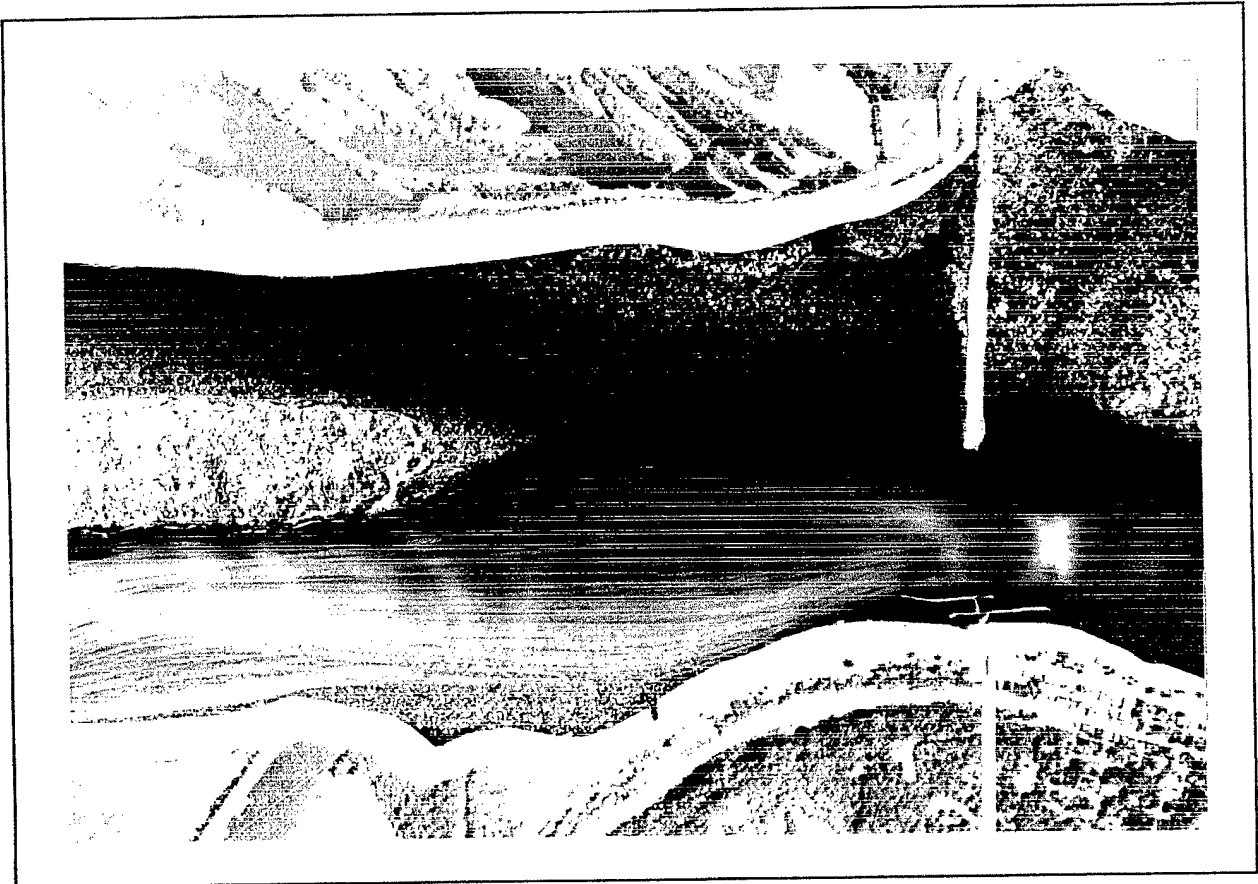
U.S ARMY ENGINEER DISTRICT, ST. LOUIS
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PREPARED BY: D. Gordon
CHECKED BY: R. Denney

Lock and Dam 24 Micro Model Study
Mississippi River Miles 271 - 277
Flow Visualization - Alternative R

PLATE NO.

63



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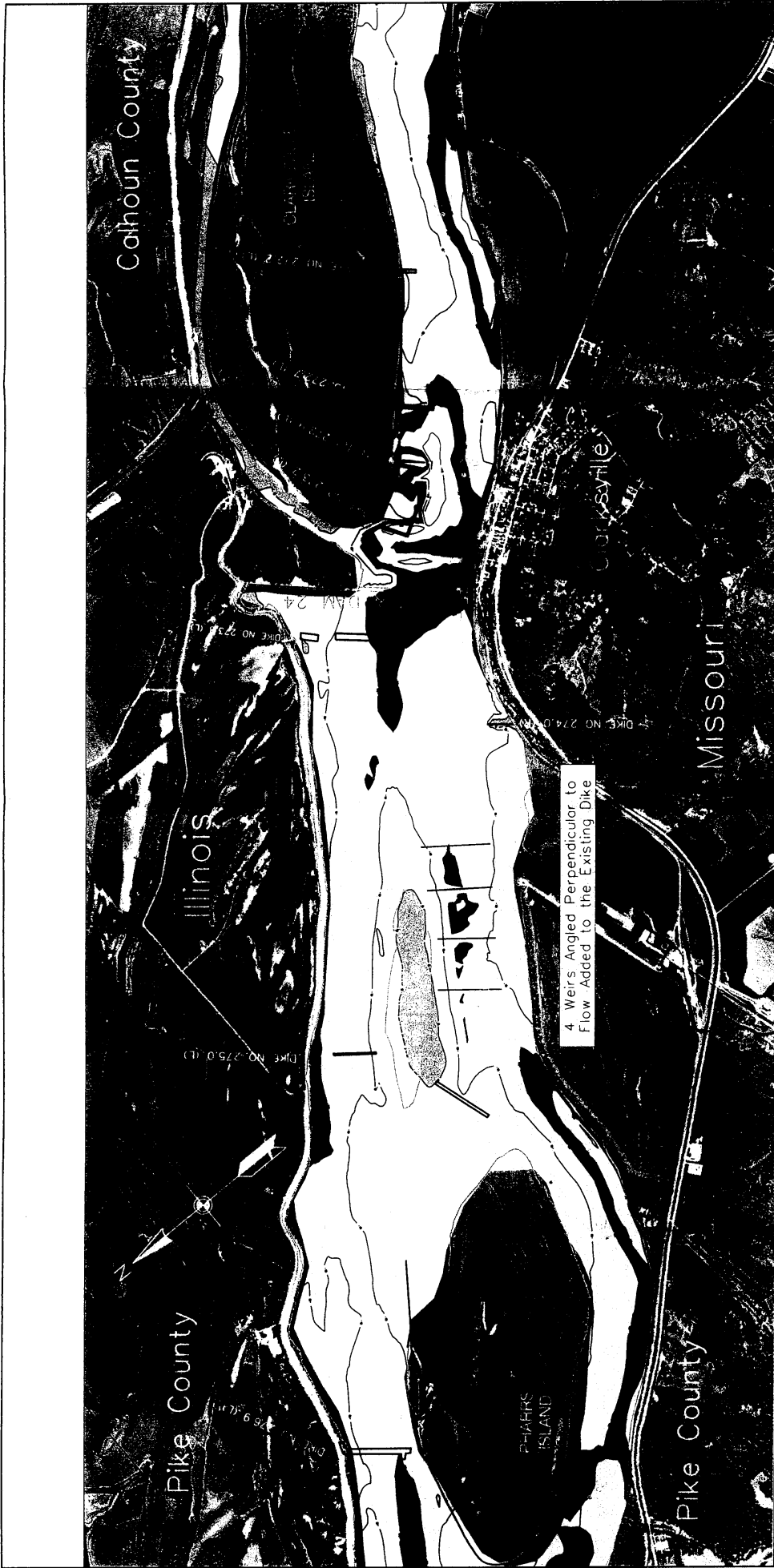
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Lock and Dam 24 Micro Model Study
Mississippi River Miles 271 - 277

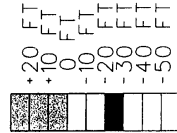
Flow Visualization - Alternative S

PLATE NO

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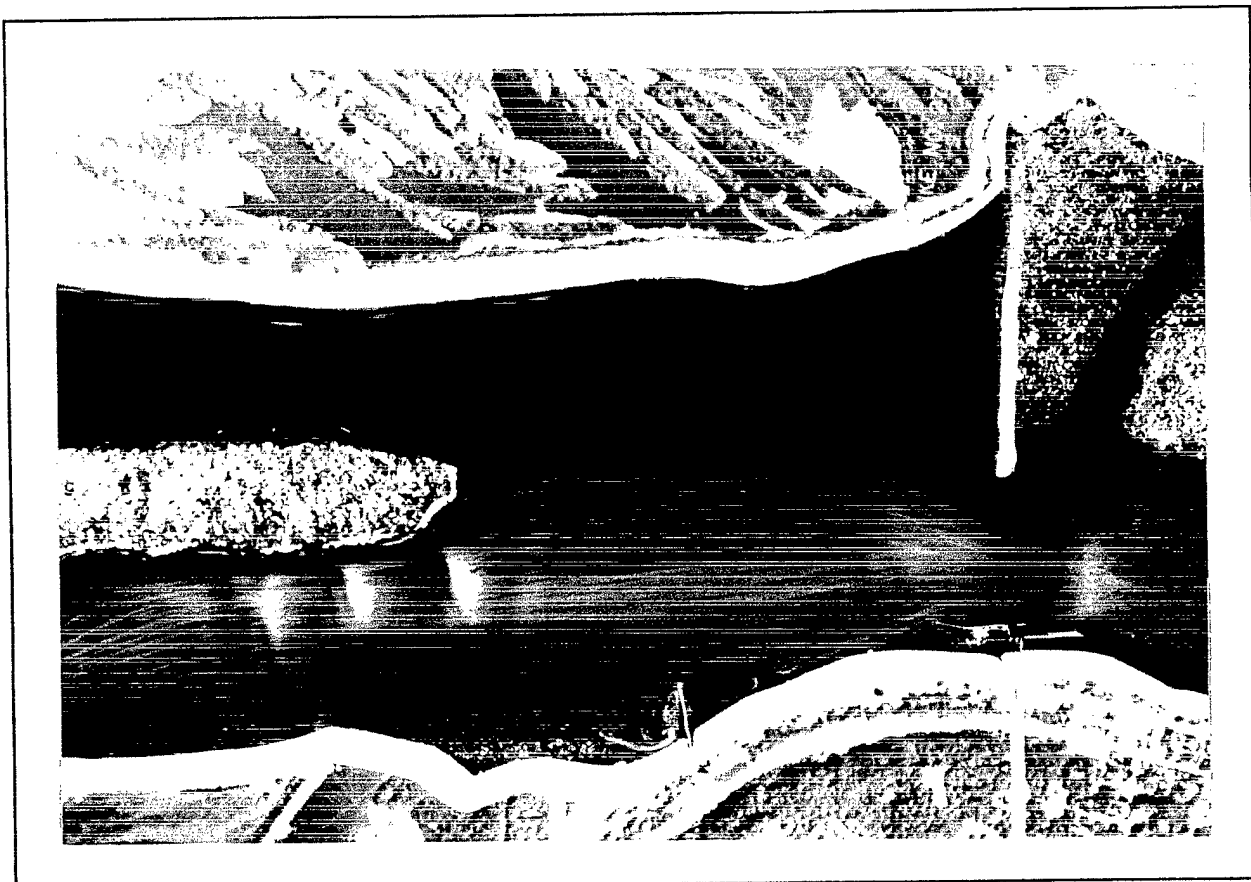
Lock and Dam #24 Micro Model Study
Mississippi River Miles 271 - 277

Alternative I

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PREPARED BY: D. Gordon
CHECKED BY: R. Davinroy

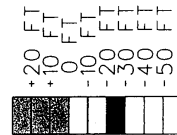
Lock and Dam 24 Micro Model Study
Mississippi River Miles 271 - 277
Flow Visualization - Alternative I

PLATE NO

67



Elevations Referenced
to LWRP



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	Lock and Dam #24 Micro Model Study Mississippi River Miles 271 - 277 Alternative U
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PLATE NO.	
68	



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PREPARED BY: D. Gordon
CHECKED BY: R. Dainoff

Lock and Dam 24 Micro Model Study
Mississippi River Miles 271 - 277

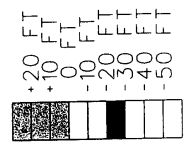
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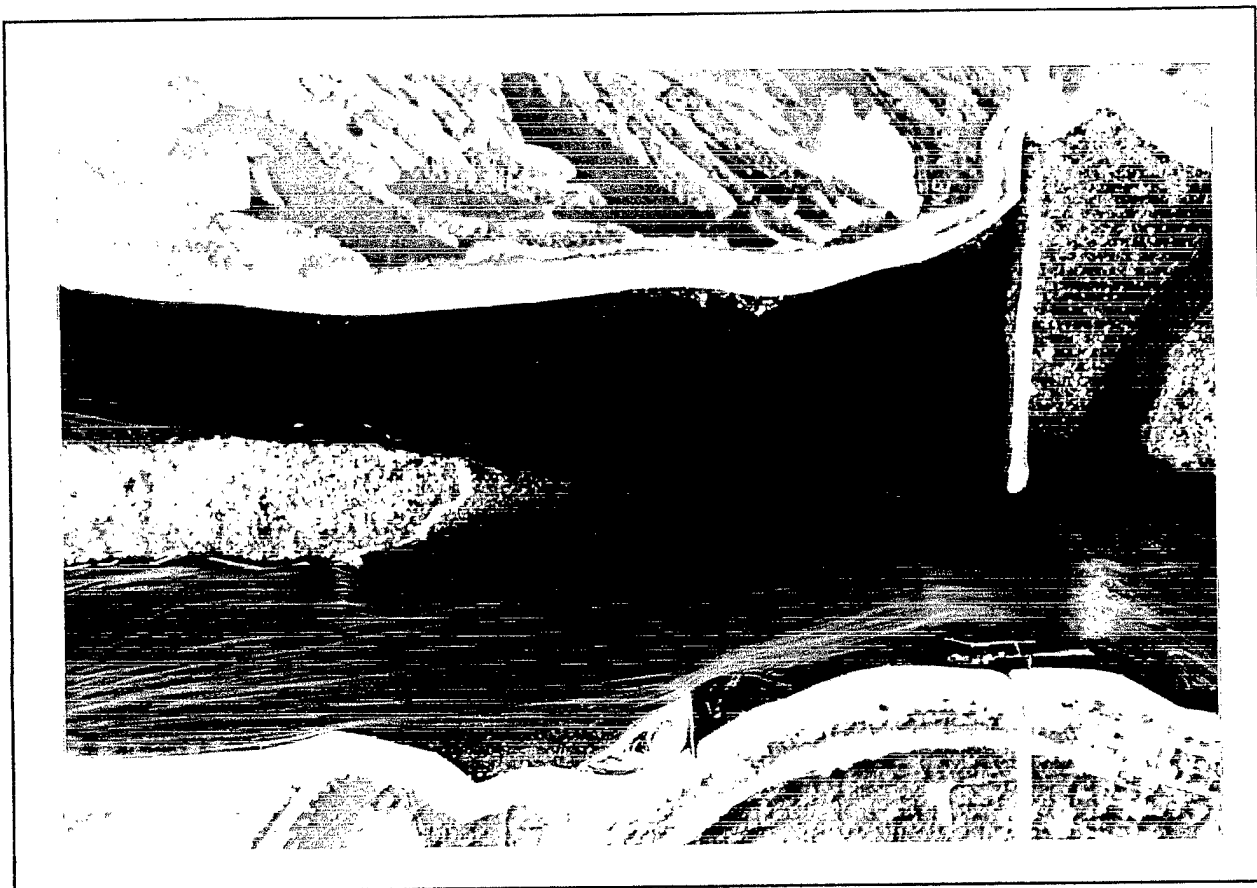
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Elevations Referenced
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PREPARED BY: G. Gordon DRAWN BY: D. Gordon CHECKED BY: R. Gordon	
DESIGN FILE: D. GORDON/LWRP/24 SHEET SCALE: 1" = 2000' DATE NO. 70	



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PREPARED BY D. Gordon
CHECKED BY R. DeVinney

Lock and Dam 24 Micro Model Study
Mississippi River Miles 271 - 277

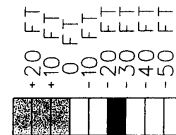
Flow Visualization - Alternative V

PLATE NO

71



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Lock and Dam #24 Micro Model Study
Mississippi River Miles 271 - 277

Alternative W

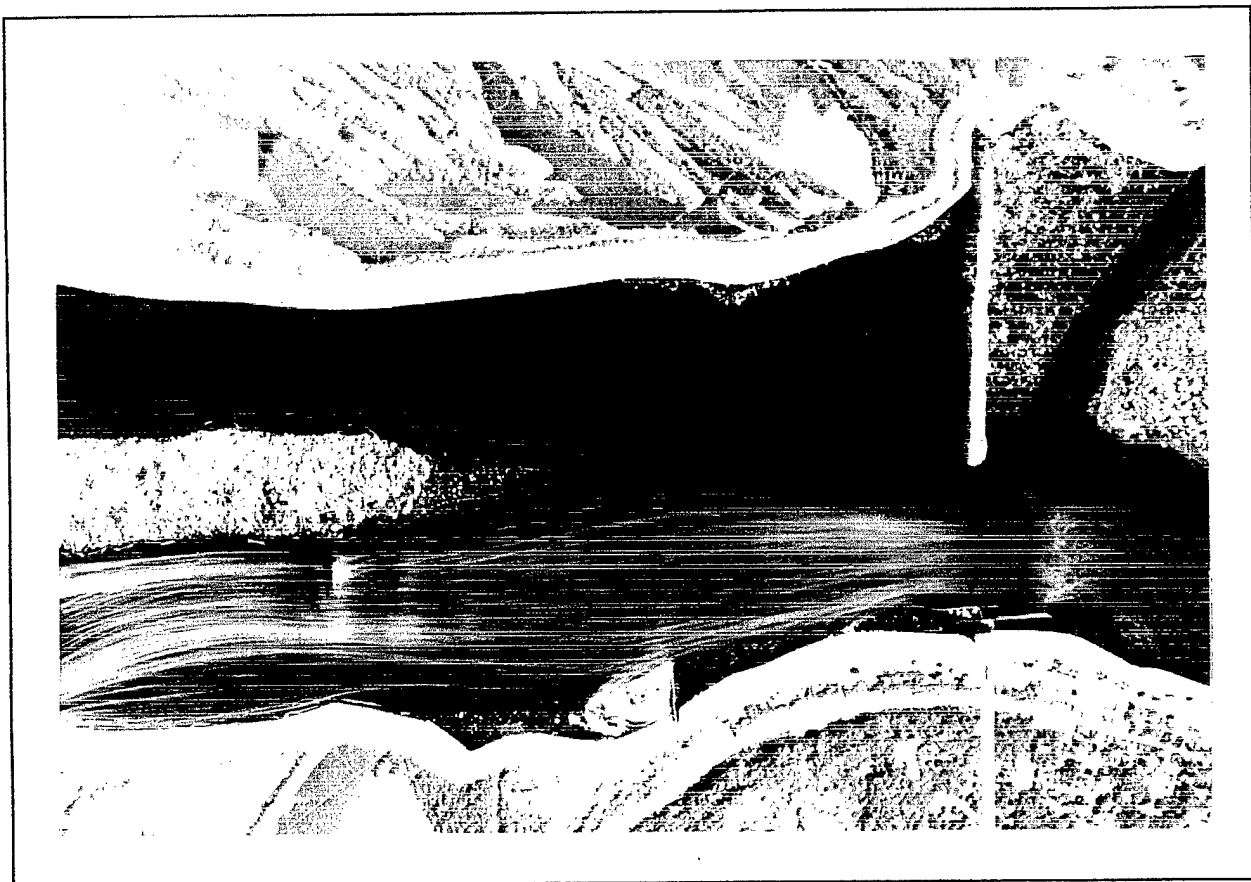
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PLOT SCALE 1" = 2000'

PLATE NO

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PREPARED BY D. Gordon
CHECKED BY R. Davinray

Lock and Dam 24 Micro Model Study
Mississippi River Miles 271 - 277

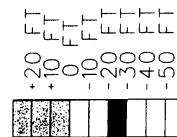
Flow Visualization - Alternative W

PLATE NO

73



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Lock and Dam #24 Micro Model Study
Mississippi River Miles 271 - 277
Alternative X

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DESIGN FILE: 64-000-0000-140-241

PLOT SCALE: 1" = 2000'

PLATE NO.

74



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PREPARED BY: D. Gordon
CHECKED BY: R. Davnroy

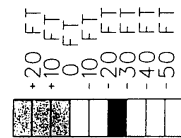
Lock and Dam 24 Micro Model Study
Mississippi River Miles 271 - 277
Flow Visualization - Alternative X

PLATE NO

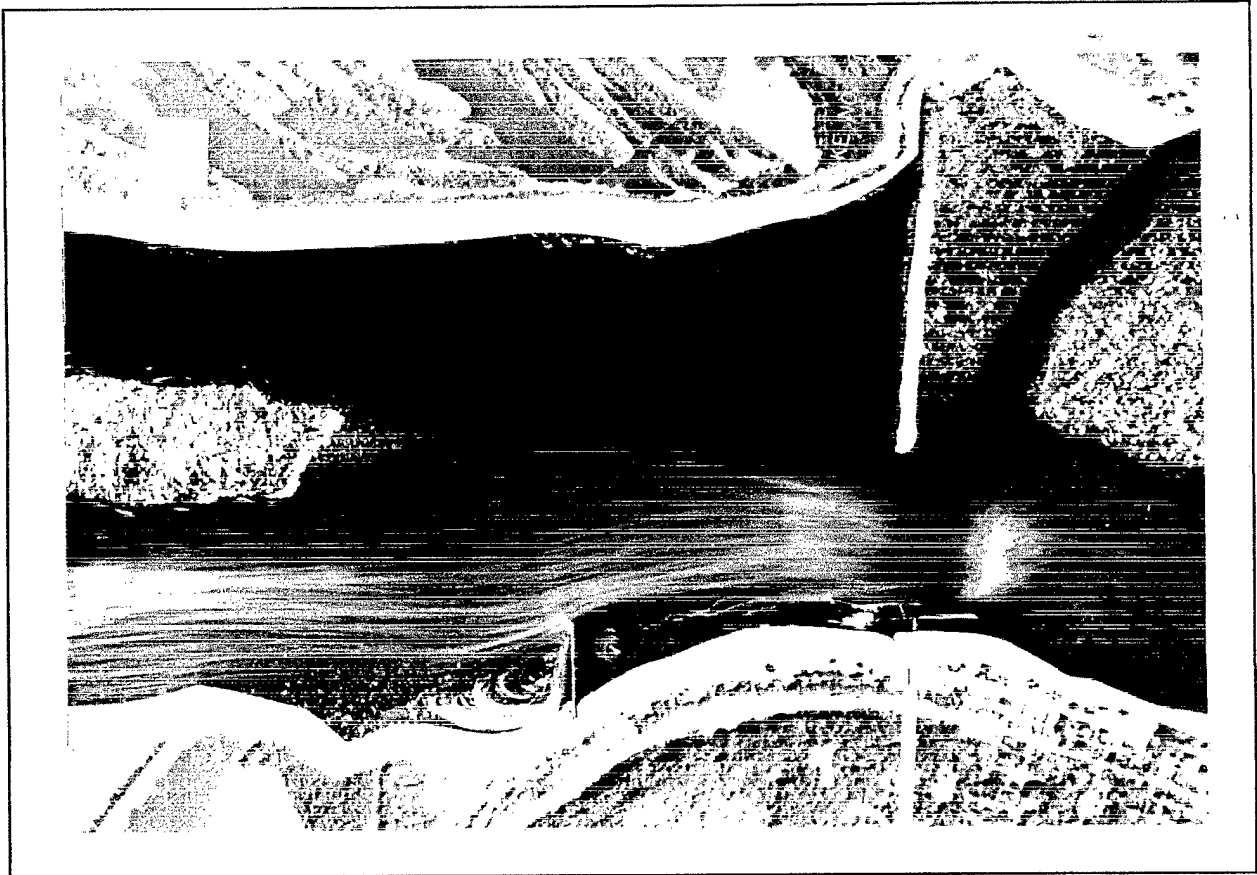
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PLATE NO. 76	



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PREPARED BY: D. Gordon
CHECKED BY: R. Dainoff

Lock and Dam 24 Micro Model Study
Mississippi River Miles 271 - 277
Flow Visualization - Alternative Y

PLATE NO

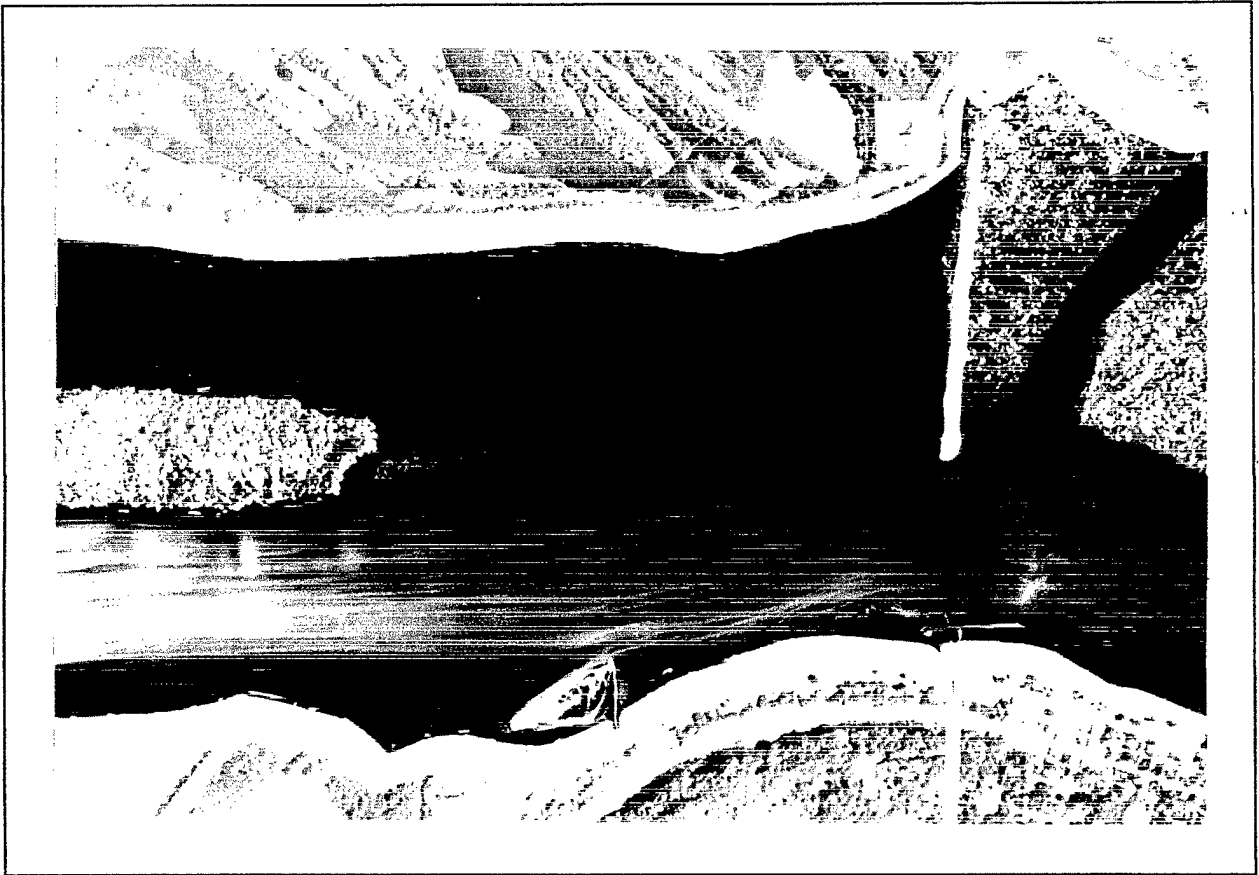
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	U.S. ARMY ENGINEER DISTRICT, ST. LOUIS CORPS OF ENGINEERS ST. LOUIS, MISSOURI
	Lock and Dam #24 Micro Model Study Mississippi River Miles 271 - 277 Alternative Z-0
PREPARED BY: D. Corbett CHECKED BY: S. Corbett DESIGNED BY: R. Denny	1500' 0 500' 1000' 1500' DESIGN FILE: D:\1000-MODEL\1000-24\1 PLOT SCALE: 1" = 2000'
PLATE NO. 78	



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CHECKED BY: R. Davinroy

Lock and Dam 24 Micro Model Study
Mississippi River Miles 271 - 277
Flow Visualization - Alternative Z-0

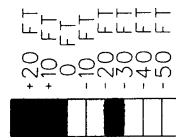
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79

Calhoun County



Elevations Referenced
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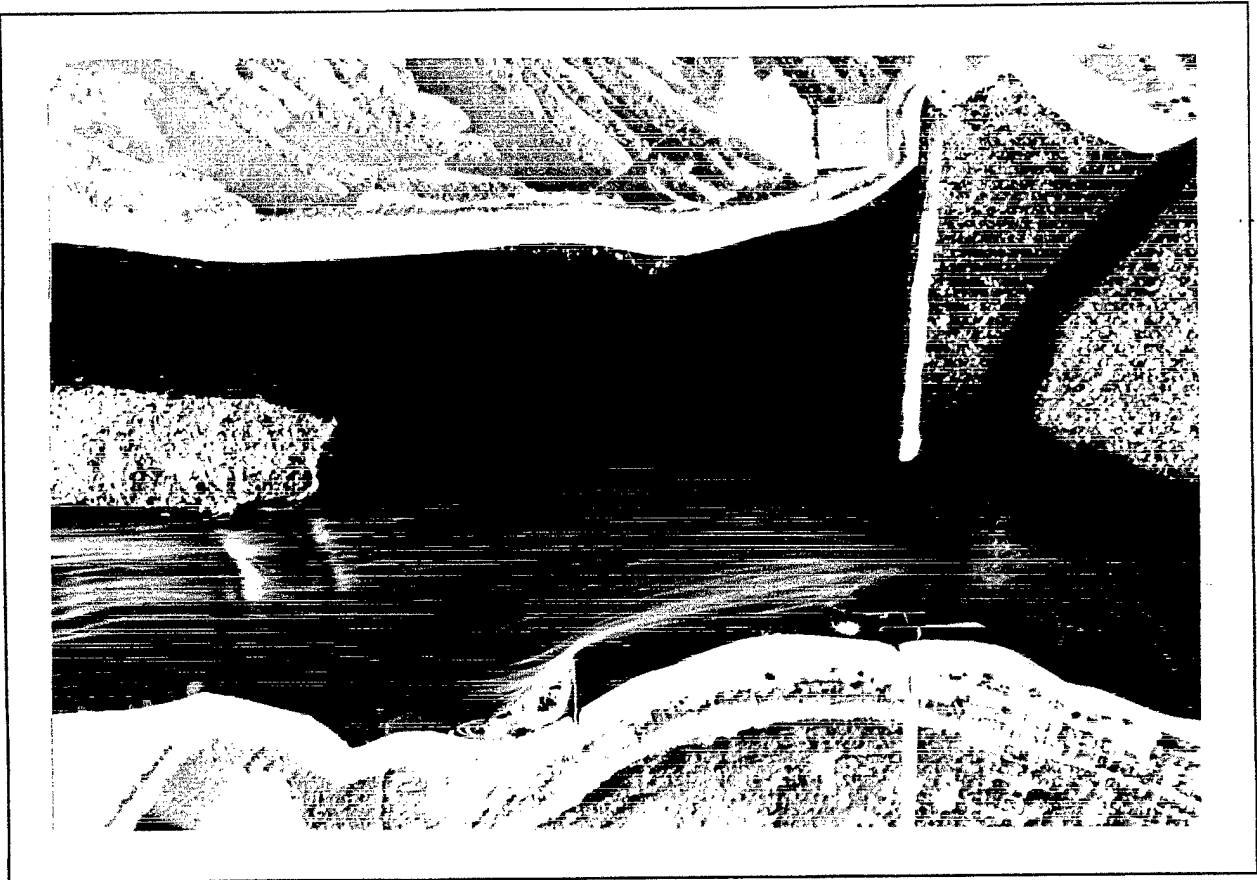
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Lock and Dam #24 Micro Model Study
Mississippi River Miles 271 - 277
Alternative Z-1

1500' 0 500' 1000' 1500'

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80



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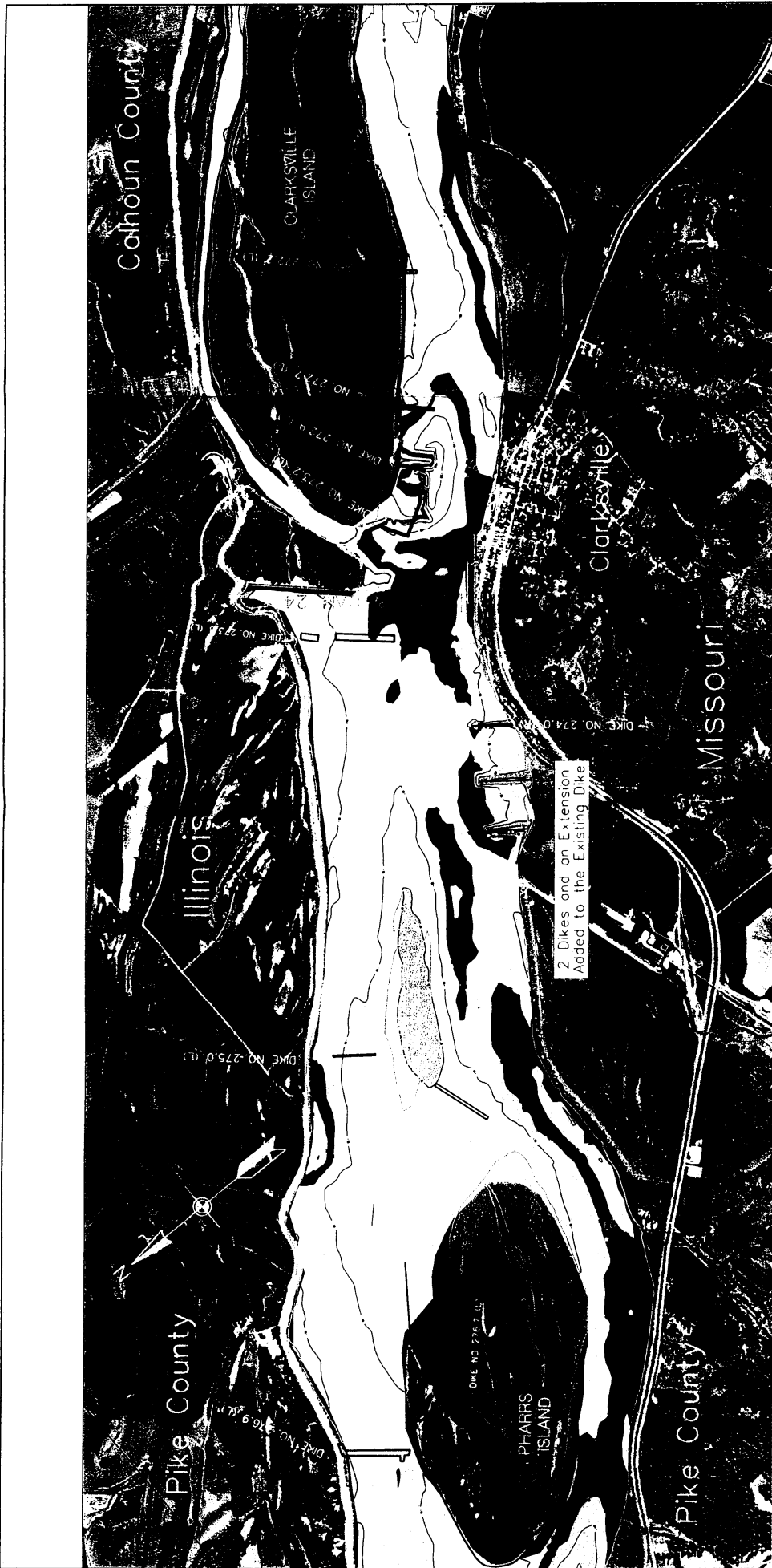
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CHECKED BY: R. Dimmoy

Lock and Dam 24 Micro Model Study
Mississippi River Miles 271 - 277

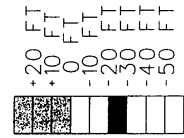
Flow Visualization - Alternative Z-1

PLATE NO

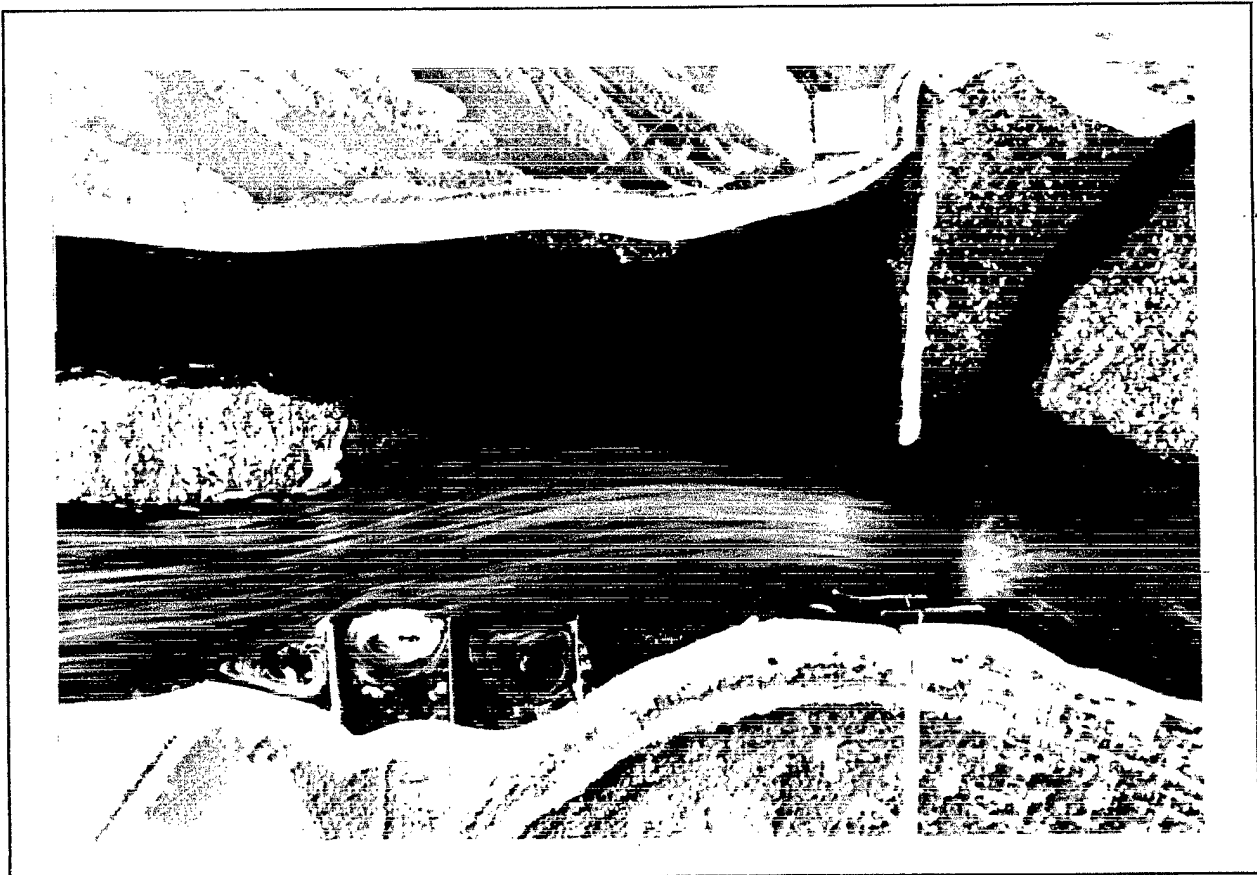
81



Elevations Referenced
to LWRP



	U.S. ARMY ENGINEER DISTRICT, ST. LOUIS CORPS OF ENGINEERS ST. LOUIS, MISSOURI
	Lock and Dam #24 Micro Model Study Mississippi River Miles 271 - 277 Alternative Z-2
DESIGNED BY: D. Gorton DRAWN BY: D. Gorton CHECKED BY: R. Dornay	
DESIGN FILE: 0-000-000-000-24 PLOT SCALE: 1" = 2000'	
PLATE NO. 82	



U.S ARMY ENGINEER DISTRICT, ST. LOUIS
CORPS OF ENGINEERS
ST. LOUIS, MISSOURI

PREPARED BY: D. Gordon
CHECKED BY: R. Downey

Lock and Dam 24 Micro Model Study
Mississippi River Miles 271 - 277
Flow Visualization - Alternative Z-2

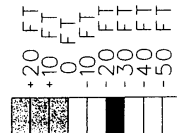
PLATE NO

83



Elevations Referenced

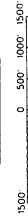
to LWRP



U.S. ARMY ENGINEER DISTRICT, ST. LOUIS
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Lock and Dam #24 Micro Model Study
Mississippi River Miles 271 - 277

Alternative Z-3

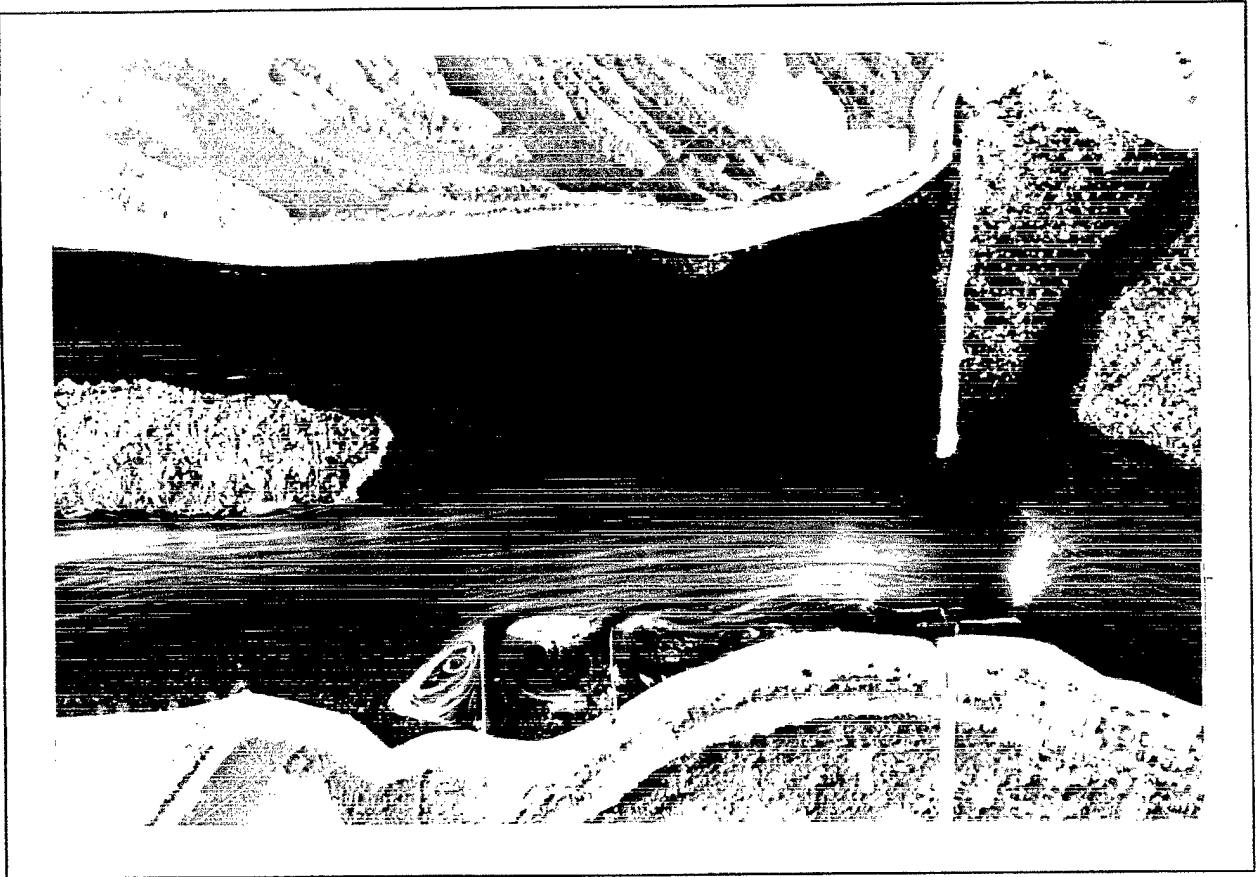


DESIGN FILE: D:\GMODEL\LIBR27A

PLOT SCALE: 1" = 2000'

PLATE NO

84



U.S ARMY ENGINEER DISTRICT, ST. LOUIS
CORPS OF ENGINEERS
ST. LOUIS, MISSOURI

PREPARED BY: D. Gordon
CHECKED BY: R. Dammroy

Lock and Dam 24 Micro Model Study
Mississippi River Miles 271 - 277

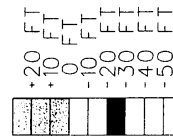
Flow Visualization - Alternative Z-3

PLATE NO

85



Elevations Referenced
to LWRP



PREPARED BY: B. Gordon
DRAWN BY: B. Gordon
CHECKED BY: B. Gordon

U.S. ARMY ENGINEER DISTRICT, ST. LOUIS
CORPS OF ENGINEERS
ST. LOUIS, MISSOURI

Lock and Dam #24 Micro Model Study
Mississippi River Miles 271 - 277

Alternative Z-4

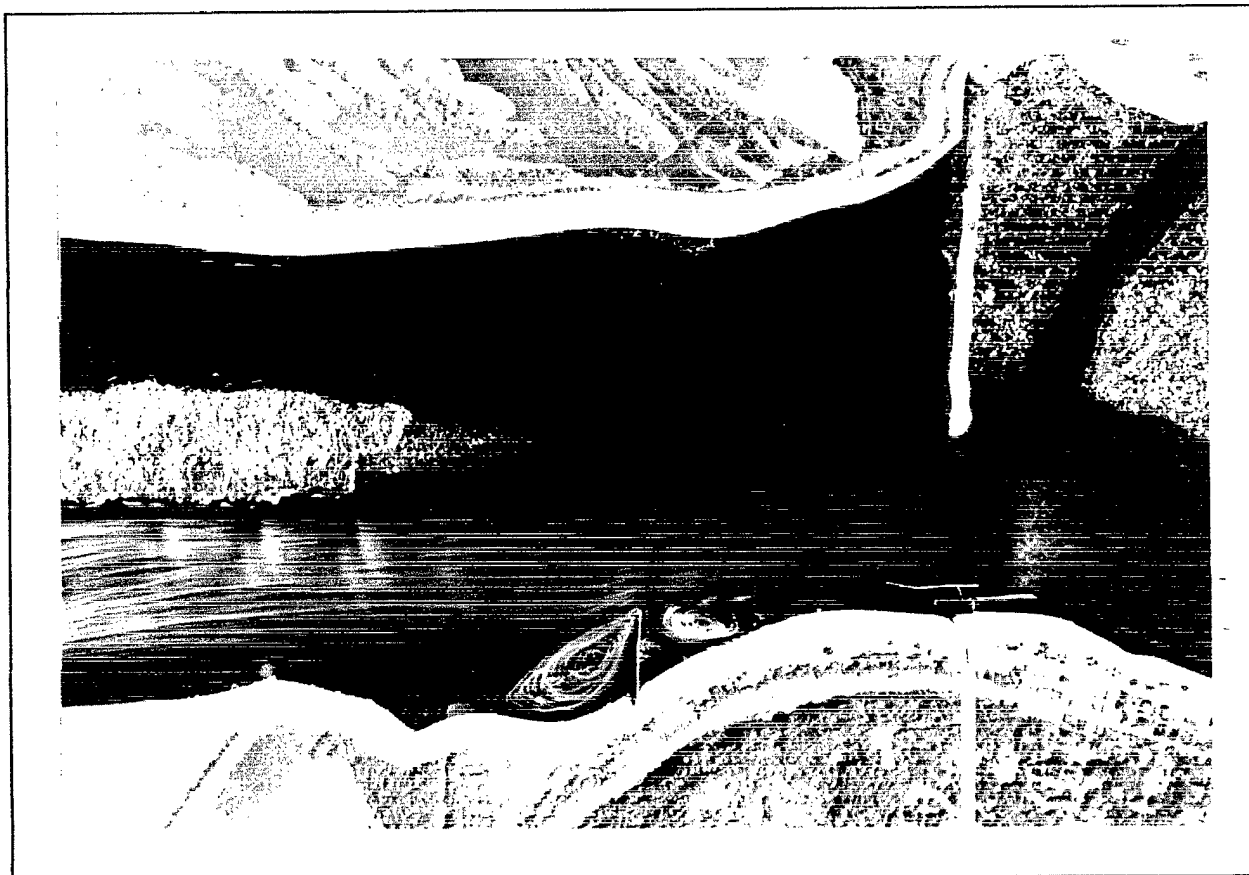
1500' 0' 500' 1000' 1500'

DESIGN FILE: D-100-MADE-140-75A

PLOT SCALE: 1" = 2000'

PLATE NO.

86



**U.S ARMY ENGINEER DISTRICT, ST. LOUIS
CORPS OF ENGINEERS
ST. LOUIS, MISSOURI**

PREPARED BY: D. Gordon
CHECKED BY: R. Damrey

**Lock and Dam 24 Micro Model Study
Mississippi River Miles 271 - 277
Flow Visualization - Alternative Z-4**

PLATE NO

87